

From the INTERNATIONAL BUREAU

PCTNOTIFICATION CONCERNING
SUBMISSION OR TRANSMITTAL
OF PRIORITY DOCUMENT

(PCT Administrative Instructions, Section 411)

To:

PITCHFORD, James, Edward
Marks & Clerk
45 Grosvenor Road
St Albans AL1 3AW
ROYAUME-UNI

Date of mailing (day/month/year) 23 February 2005 (23.02.2005)	
Applicant's or agent's file reference PA 5112 PCT.INT	IMPORTANT NOTIFICATION
International application No. PCT/GB04/004113	International filing date (day/month/year) 29 September 2004 (29.09.2004)
International publication date (day/month/year)	Priority date (day/month/year) 29 September 2003 (29.09.2003)
Applicant RUTHERFORD, Stephen, Graham et al	

- By means of this Form, which replaces any previously issued notification concerning submission or transmittal of priority documents, the applicant is hereby notified of the date of receipt by the International Bureau of the priority document(s) relating to all earlier application(s) whose priority is claimed. Unless otherwise indicated by the letters "NR", in the right-hand column or by an asterisk appearing next to a date of receipt, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).
- (If applicable)* The letters "NR" appearing in the right-hand column denote a priority document which, on the date of mailing of this Form, had not yet been received by the International Bureau under Rule 17.1(a) or (b). Where, under Rule 17.1(a), the priority document must be submitted by the applicant to the receiving Office or the International Bureau, but the applicant fails to submit the priority document within the applicable time limit under that Rule, **the attention of the applicant is directed to Rule 17.1(c)** which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.
- (If applicable)* An asterisk (*) appearing next to a date of receipt, in the right-hand column, denotes a priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b) (the priority document was received after the time limit prescribed in Rule 17.1(a) or the request to prepare and transmit the priority document was submitted to the receiving Office after the applicable time limit under Rule 17.1(b)). Even though the priority document was not furnished in compliance with Rule 17.1(a) or (b), the International Bureau will nevertheless transmit a copy of the document to the designated Offices, for their consideration. In case such a copy is not accepted by the designated Office as the priority document, Rule 17.1(c) provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

<u>Priority date</u>	<u>Priority application No.</u>	<u>Country or regional Office or PCT receiving Office</u>	<u>Date of receipt of priority document</u>
29 September 2003 (29.09.2003)	0322740.2	GB	11 November 2004 (11.11.2004)
30 October 2003 (30.10.2003)	0325294.7	GB	21 February 2005 (21.02.2005)
16 June 2004 (16.06.2004)	0413471.4	GB	25 November 2004 (25.11.2004)

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Boccard Paulette
Facsimile No. +41 22 740 14 35	Facsimile No. +41 22 338 87 40 Telephone No. +41 22 338 8147



GB04/4113



101574164 PCT/GB2004/004113

REC'D 11 NOV 2004	
WIPO	PCT



INVESTOR IN PEOPLE

The Patent Office
Concept House
Cardiff Road
Newport
South Wales
NP10-8QQ

PRIORITY DOCUMENT

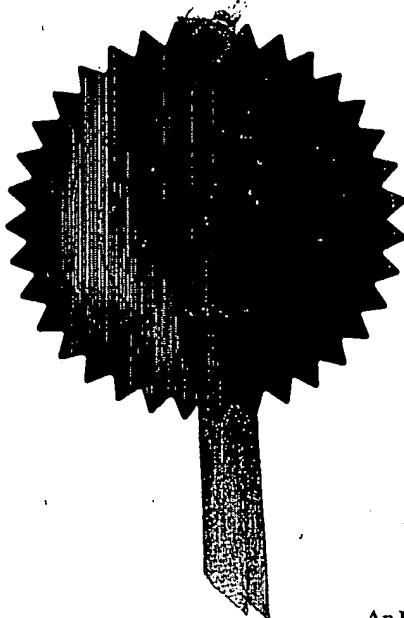
SUBMITTED OR TRANSMITTED IN
COMPLIANCE WITH RULE 17.1(a) OR (b)

I, the undersigned, being an officer duly authorised in accordance with Section 74(1) and (4) of the Deregulation & Contracting Out Act 1994, to sign and issue certificates on behalf of the Comptroller-General, hereby certify that annexed hereto is a true copy of the documents as originally filed in connection with the patent application identified therein.

In accordance with the Patents (Companies Re-registration) Rules 1982, if a company named in this certificate and any accompanying documents has re-registered under the Companies Act 1980 with the same name as that with which it was registered immediately before re-registration save for the substitution as, or inclusion as, the last part of the name of the words "public limited company" or their equivalents in Welsh, references to the name of the company in this certificate and any accompanying documents shall be treated as references to the name with which it is so re-registered.

In accordance with the rules, the words "public limited company" may be replaced by p.l.c., plc, P.L.C. or PLC.

Re-registration under the Companies Act does not constitute a new legal entity but merely subjects the company to certain additional company law rules.



Signed

Stephen Hordley

Dated 3 November 2004

Patents Form 1/77

Patents Act 1977
(Rule 16)

THE PATENT OFFICE
SW
29 SEP 2003
RECEIVED BY FAX

The
Patent
Office

29SEP03 E840702-2 D00790
P01/7700 0.00-0322740.2

Request for grant of a patent

(See the notes on the back of this form. You can also get an explanatory leaflet from the Patent Office to help you fill in this form)

The Patent Office

Cardiff Road
Newport
South Wales
NP9 1RH

1. Your reference

PA 4920

2. Patent application number

(The Patent Office will fill in this part)

0322740.2

29 SEP 2003

3. Full name, address and postcode of the or of each applicant (underline all surnames)

Stephen Graham RUTHEREFORD
34 Kincroft
Hemel Hempstead
Hertfordshire
HP3 8HH
United Kingdom

James Harold JOHNS
17 Purcell Way
Sheffield
Bedfordshire
SG17 5RY
United Kingdom

Patents ADP number (if you know it)

If the applicant is a corporate body, give the country/state of its incorporation

1297712002

8722373001

4. Title of the invention

IMPROVED PLATTER

5. Name of your agent (if you have one)

SOMMERVILLE & RUSHTON

"Address for service" in the United Kingdom
to which all correspondence should be sent
(including the postcode)

45 Grosvenor Road
St Albans
Herts AL1 3AW

Patents ADP number (if you know it)

1511001

6. If you are declaring priority from one or more earlier patent applications, give the country and the date of filing of the or of each of these earlier applications and (if you know it) the or each application number

Country

Priority application number
(if you know it)Date of filing
(day / month / year)

7. If this application is divided or otherwise derived from an earlier UK application, give the number and the filing date of the earlier application

Number of earlier application

Date of filing
(day / month / year)

8. Is a statement of inventorship and of right to grant of a patent required in support of this request? (Answer 'Yes' if:

No

- a) any applicant named in part 3 is not an inventor, or
b) there is an inventor who is not named as an applicant, or
c) any named applicant is a corporate body.
See note (d))

Patents Form 1/77

0081223 29-Sep-03 02:56

Patents Form 1/77

9. Enter the number of sheets for any of the following items you are filing with this form.
Do not count copies of the same document

Continuation sheets of this form 0

Description 12 ✓

Claim(s) 4 ✓

Abstract 1 ✓

Drawing(s) 5 ✓

10. If you are also filing any of the following, state how many against each item.

Priority documents 0

Translations of priority documents 0

Statement of inventorship and right to grant of a patent (Patents Form 7/77) 0

Request for preliminary examination and search (Patents Form 8/77) 0

Request for substantive examination (Patents Form 10/77) 0

Any other documents 0
(please specify)

11. I/We request the grant of a patent on the basis of this application.

Signature

Date

Sommerville & Rushton

29 September 2003

12. Name and daytime telephone number of person to contact in the United Kingdom

DR JAMES PITCHFORD
01727 854215

Warning

After an application for a patent has been filed, the Comptroller of the Patent Office will consider whether publication or communication of the invention should be prohibited or restricted under Section 22 of the Patents Act 1977. You will be informed if it is necessary to prohibit or restrict your invention in this way. Furthermore, if you live in the United Kingdom, Section 23 of the Patents Act 1977 stops you from applying for a patent abroad without first getting written permission from the Patent Office unless an application has been filed at least 6 weeks beforehand in the United Kingdom for a patent for the same invention and either no direction prohibiting publication or communication has been given, or any such direction has been revoked.

Notes

- If you need help to fill in this form or you have any questions, please contact the Patent Office on 0645 500505.
- Write your answers in capital letters using black ink or you may type them.
- If there is not enough space for all the relevant details on any part of this form, please continue on a separate sheet of paper and write "see continuation sheet" in the relevant part(s). Any continuation sheet should be attached to this form.
- If you have answered 'Yes' Patents Form 7/77 will need to be filed.
- Once you have filled in the form you must remember to sign and date it.
- For details of the fee and ways to pay please contact the Patent Office.

Patents Form 1/77

IMPROVED PLATTER

This invention relates to a platter for use in commercial ovens.

5 **Background to the Invention**

Forced air / microwave combination ovens are in common usage, and one popular model is the TurboChef C3 oven, supplied by TurboChef Technologies, Inc., of 10500 Metric Drive, Suite 128, Dallas, TX 75243, USA. Such ovens are typically found in petrol stations, motorway service area cafeterias and roadside restaurants, and are used for cooking or
10 defrosting a wide range of foods such as pizzas, hot filled baguettes, lasagne, steak, fish, burgers and pies. The ovens use a combination of rapidly-moving electrically-heated hot air and microwave radiation, and will be referred to herein as forced air / microwave combination ovens. The TurboChef C3 can reach a cooking temperature of 275 °C, and cooks on average at seven times the speed of a conventional oven. The microwave
15 generator is located beneath the oven chamber, and transmits microwave radiation via a waveguide up into the oven chamber. The forced air is delivered from above, into the top of the oven chamber, and is extracted from the bottom of the chamber, beneath the platter. The microwave and hot air modes of cooking food may be used independently or together, and the oven is processor-controlled to run a range of cooking routines using the different
20 cooking modes.

The platter of a forced air / microwave combination oven is located towards the bottom of the cooking chamber, above the microwave generator. The platter is essentially a shelf on which cookware is placed, the cookware containing the food to be cooked. The platter
25 contains holes through which forced air passes, and is also microwave-permeable to enable

microwave radiation to reach food placed on the platter. Traditionally, such platters are made from a porous ceramic material, and several disadvantages, shortcomings and problems have been identified, as follows:

5 1. *Desire for greater cooking efficiency using forced air*

There is a desire to improve the efficiency of cooking using forced air, and also to reduce the frequency with which high temperature thermal cutout devices trip during service. This in turn would give rise to faster cooking times and more efficient use of energy. The current forced air cooking performance of such ovens, and the frequency with which the cutout
10 devices trip, is thought to be influenced by the number and distribution of the apertures through the platter. Traditional ceramic platters have a somewhat irregular distribution of apertures, and there are areas in which relatively few apertures are provided. This is thought to limit the airflow and may give rise to undesirable thermal cutout trips in service. The limited number and irregular distribution of the apertures in traditional platters is thought
15 to be because the ceramic material would be more liable to fracture if more apertures were provided.

Enhanced flow of hot air around and under the cookware on the platter is also desired, to improve the cooking performance yet further.

20

2. *Risk of incomplete cooking by microwaves alone*

Although the apertures are distributed across much of the area of a conventional ceramic platter, the microwave radiation used in the oven is concentrated in a specific area in the centre of the platter. Traditionally, the user has been free to position the food product
25 anywhere on the platter. However, it will be appreciated that if the food product is to be

cooked only by microwave radiation, and not by hot air, then placement of the food off-centre on the platter can result in it not being adequately cooked.

3. *Handling and cleaning problems*

- 5 A forced air / microwave combination oven may be in almost continuous use throughout the day, particularly in motorway service areas and the like which are frequented by customers at all hours. Given the nature of the food products that are prepared, the platter can readily become unclean, particularly from cheese and other molten materials that fall from the cookware and become burnt onto the platter. In a catering environment, food hygiene and
10 cleanliness are of paramount importance, and so the staff that operate the ovens are required to clean them regularly.

- Traditionally, platters used in such ovens are made from a porous ceramic material, and chip easily when being cleaned, due to the inherent brittleness of the ceramic material. Cleaning
15 staff may not be particularly careful when carrying out their job, and this increases the likelihood of chipping or breakage of the ceramic platters. Also, because of their porosity, conventional platters cannot be soaked during cleaning, as this would result in the platter taking in water through the network of pores inherent in the material. Thus, it will be appreciated that cleaning off the burnt on food products can be very difficult and time
20 consuming to do properly, without soaking the platter. An unscrupulous worker may well soak the platter, contrary to instructions, or may simply not clean the platter thoroughly.

Summary of the invention

- According to a first aspect of the invention there is provided a platter for use in a forced air /
25 microwave combination oven, the platter comprising an upper surface and a lower surface

and incorporating a plurality of apertures passing through the thickness of the platter; wherein one or both of the surfaces of the platter incorporate a recess substantially surrounding at least one of the apertures.

- 5 The provision of recesses around the apertures advantageously promotes the flow of air under cookware placed on the platter.

In a first embodiment, the upper surface is profiled such that each aperture is substantially surrounded by an individual recess.

10

Preferably the recess tapers outwards towards the upper surface. This reduces contact between the cookware and the platter, which can facilitate removal of the cookware if the platter is dirty.

- 15 Particularly preferably adjacent tapering recesses meet at common points on the upper surface of the platter, thereby minimising contact between the cookware and the platter, and further facilitating removal of the cookware if the platter is dirty.

- 20 In a second embodiment, the apertures are arranged in an array of rows and columns, and the upper surface is profiled such that a plurality of apertures in a row are together surrounded by an elongate recess extending along said row. The elongate recess may taper outwards towards the upper surface. Such elongate recesses advantageously retain baguettes and long rolls placed directly on the platter, and also provide long unobstructed channels for airflow under the cookware.

25

Preferably the lower surface is profiled such that a plurality of apertures in a column are together substantially surrounded by an elongate recess extending along said column. The elongate recess may taper outwards towards the lower surface. This arrangement advantageously provides strength and flexural rigidity to the platter, and prevents
5 undesirable flexing in use.

Either embodiment may optionally further incorporate an indentation shaped to receive an item of cookware, the indentation being positioned to align the cookware with microwave radiation in the oven in use. This advantageously ensures that food in cookware placed in
10 the indentation is optimally exposed to microwave radiation, which is particularly important if only microwaving (and not hot air) is being used in a given cooking program.

The term "indentation" as used in this context should be interpreted broadly, to encompass any change in surface profile adapted to receive an item of cookware. Thus, an annulus or
15 other protrusions that rise from the surface of the platter and which are adapted to receive an item of cookware, function in essentially the same way as an indentation and should be treated as such.

With either embodiment, the apertures may be distributed over substantially the entire
20 surface area of the platter. This promotes airflow around the oven and provides a more extensive cooking area, and is also less likely to impede the flow of hot air which can often be the cause of the oven cutting out or tripping.

Preferably the platter is made of a polymer material, particularly preferably a liquid crystal
25 polymer resin reinforced with glass, such as DuPont (RTM) Zenite (RTM) 7130.

Advantageously, such materials are easy to clean and may be soaked in water without detriment.

According to a second aspect of the invention there is provided a platter for use in a forced
5 air / microwave combination oven, wherein the platter incorporates an indentation shaped to
receive an item of cookware, the indentation being positioned to align the cookware with
microwave radiation in the oven in use.

According to a third aspect of the invention there is provided a platter for use in a forced air /
10 microwave combination oven, the platter incorporating apertures distributed over
substantially the entire surface area of the platter.

According to a fourth aspect of the invention there is provided a platter for use in a forced air
/ microwave combination oven, the platter being made of a polymer material. Preferably the
15 polymer material is a liquid crystal polymer resin reinforced with glass. Particularly
preferably the platter is made of DuPont (RTM) Zenite (RTM) 7130.

According to a fifth aspect of the invention there is provided a forced air / microwave
combination oven having a platter in accordance with any of the first, second, third or fourth
20 aspects of the invention.

According to a sixth aspect of the invention there is provided a method of cooking using a
forced air / microwave combination oven having a platter in accordance with any of the first,
second, third or fourth aspects of the invention.

25

Brief Description of the Drawings

Embodiments of the invention will now be described, by way of example, and with reference to the drawings in which:

Figure 1 illustrates a forced air / microwave combination oven, indicating the position of the microwave waveguide and platter in use, and showing a prior art platter;

Figure 2 illustrates a first embodiment of an improved platter;

Figure 3 shows a close-up view of part of a platter in accordance with the first embodiment;

Figure 4 shows a variant of the first embodiment;

Figure 5 illustrates plan and side elevations of a second embodiment of an improved platter, without a central indentation; and

Figure 6 illustrates plan and side elevations of the second embodiment, with a central indentation to receive an item of cookware in use, and example dimensions.

Detailed Description of Preferred Embodiments

The present embodiments represent the best ways known to the applicant of putting the invention into practice. However they are not the only ways in which this can be achieved.

By way of background, Figure 1 shows an example of a TurboChef C3 forced air / microwave combination oven 10. The oven measures approximately 550 mm high, 740 mm wide, and 820 mm from front to back. The microwave waveguide 14 is situated at the base of the cooking chamber, and is covered by a waveguide cap 16. The platter 12 is then located on a pair of support rails 18, above the waveguide cap.

Traditional platters are made from porous ceramic material, and consequently cannot readily be formed into intricate shapes. As Figure 1 shows, a traditional platter 12 is essentially a

flat plate having a number of protrusions rising from the upper surface to support an article of cookware placed thereon. The protrusions are elongated with flat tops, and radiate from the centre of the platter. Some apertures are provided between the protrusions in the central region of the platter.

5

The embodiments of the invention that will now be described are presently preferably made from DuPont (RTM) Zenite (RTM) 7130, a liquid crystal polymer resin reinforced with 30% glass that is able to withstand temperatures of up to 289 °C, which is well in excess of the maximum operating temperature of the TurboChef C3 oven. This material is well suited to injection moulding, thereby enabling the intricate shapes of platters described herein to be readily formed. Highly advantageously, and in marked contrast to traditional porous ceramic platters, a resin platter can easily be cleaned without risk of brittle failure or chipping, and can be soaked in water without detriment. This enables better hygiene and levels of cleanliness to be maintained.

15

Other materials suitable for use in a forced air / microwave combination oven may be used instead of DuPont (RTM) Zenite (RTM), and the present disclosure is intended to apply to and encompass all suitable materials already in existence and those which have yet to be discovered or developed, such as advanced engineering polymers, glasses, ceramics and composite materials. For example, DuPont (RTM) Thermx (RTM), a high performance polyester, may be used as an alternative to Zenite (RTM).

20

Turning now to a first embodiment of the invention, Figure 2 shows a platter 20 incorporating an extensive array of holes or apertures 21, 22 passing through the thickness of the platter. The provision of an array of apertures as shown in Figure 2 is to be contrasted with the

25

limited number of apertures provided in a traditional ceramic platter. It is believed that an extensive array of apertures as shown in Figure 2 would not be favoured with a traditional ceramic platter, since such an array would be likely to promote fracture of the ceramic platter, with the array of holes behaving effectively as perforations and defining lines along which the platter would readily break. With the use of an engineering polymer, however, such an array may be readily formed and the platter is not prone to brittle fracture.

The apertures in the platter enable forced hot air to pass through during cooking. By providing a more extensive array of apertures than in traditional platters, the present embodiment of the invention provides a more extensive cooking area through which the hot air passes, and is also less likely to impede the flow of hot air, which can often be the cause of the oven cutting out or tripping.

The upper surface of the platter 20 is profiled such that the majority of apertures are each located within an individual recess 24. These recesses taper upwardly outwards, from the edge of each aperture, to join the upper surface of the platter. As shown in Figure 2, these tapers preferably meet at common points 26. Items of cookware are then supported on the pointed crests 26. This undulating surface profile provides a number of benefits and advantages to the performance of the oven. Firstly, by placing flat-bottomed cookware on the pointed crests 26, horizontal channels are formed between the underside of the cookware and the upper surface of the platter. Hot air can pass along these channels during cooking, and an array of channels such as this provides better overall circulation of hot air around the cookware. Secondly, this arrangement minimises contact between the cookware and the platter, thereby facilitating the removal of the cookware if the platter is dirty (e.g. with gooey cheese).

Not all the apertures need be surrounded by recesses.

In the embodiment shown in Figure 2, an optional indentation 28 is formed in the centre of the upper surface of the platter. Within the indentation 28, its upper surface 29 is flat. This indentation is positioned such that an article of cookware placed therein is positioned in the optimum area in the oven chamber for microwave cooking, i.e. above the outlet of the waveguide. The indentation 28 may be circular, as shown in Figure 2, although other shapes such as squares and rectangles are also possible. Articles of cookware may advantageously be shaped to locate within the indentation 28. If the cooking program for a particular item of food only uses microwave cooking, then the user could be instructed to use such an article of cookware (e.g. by colour coding the cookware in correspondence with the cooking program) and to locate it in the indentation. This then ensures that the food is placed in the optimum position for microwave cooking, and the user does not place it over to one side on the platter where exposure to the microwave radiation would be less effective.

If the positioning of food is not critical, e.g. because both hot air and microwaves are being used, then an article of cookware larger than the indentation may be used, to span the indentation. Alternatively, the cookware may be placed on the platter aside from the indentation.

Figure 3 shows a close-up view of part of a platter 30 that is broadly the same as that shown in Figure 2. The horizontal member 32 is optional. This figure clearly shows the undulating upper surface of the platter and the recesses around the apertures.



Figure 4 shows a variant of the embodiment shown in Figures 2 and 3.

Figures 5 illustrates a second embodiment of a platter 50. Here, the apertures are arranged in an array of rows and columns. The apertures that form a row (e.g. 52, 54) are together
5 surrounded by elongate recesses 56, 57 extending along the row on the upper surface of the platter. Such elongate recesses provide specific advantages. Firstly, they retain baguettes and long rolls that are placed directly on the platter, and prevent them from rolling around. Secondly, when cookware is placed on the platter, the elongate recesses form long unobstructed channels between the platter and the underside of the cookware, which
10 promote the circulation of hot air within the oven.

The lower surface (underneath) of the platter is also profiled to incorporate elongate recesses surrounding a plurality of apertures, but these recesses 59 run at 90° to those on the upper surface. That is to say, whilst the recesses 56, 57 on the upper surface extend
15 along rows of apertures, the recesses 59 on the lower surface extend along columns of apertures. This arrangement has been found to provide strength and flexural rigidity to the platter, and prevents undesirable flexing in use. It has also been found to prevent distortion of the platter during injection moulding, when being manufactured.

20 In this embodiment, the elongate recesses taper outwards towards the outer surfaces of the platter.

Figure 6 illustrates a variant of the platter of Figure 5. This platter 60 incorporates a central indentation 62 to receive an item of cookware to ensure it is placed in an optimum position
25 for microwaving, as previously discussed with respect to Figure 1.

Test results

A platter as described herein was used in conjunction with an article of cookware as described in our co-pending patent application entitled "Improved Cookware", to cook frozen
5 pizza in a TurboChef C3 oven. The conventional cooking time for frozen pizza with this oven is 2.5 minutes. Remarkably, using a platter as described herein, and without changing the cooking temperature, the cooking time was reduced to 1.5 minutes, saving 40% of the conventional cooking time. Thus, not only is the cooking process substantially expedited, but energy is also saved by virtue of the oven being operational for less time.

10



CLAIMS

1. A platter for use in a forced air / microwave combination oven, the platter comprising an upper surface and a lower surface and incorporating a plurality of apertures passing through the thickness of the platter;
5 wherein one or both of the surfaces of the platter incorporate a recess substantially surrounding at least one of the apertures.
2. A platter as claimed in Claim 1, wherein the upper surface is profiled such that each
10 aperture is substantially surrounded by an individual recess.
3. A platter as claimed in Claim 2, wherein the recess tapers outwards towards the upper surface.
- 15 4. A platter as claimed in Claim 3, wherein adjacent tapering recesses meet at common points on the upper surface of the platter.
5. A platter as claimed in Claim 1, wherein the apertures are arranged in an array of rows and columns, and wherein the upper surface is profiled such that a plurality of
20 apertures in a row are together substantially surrounded by an elongate recess extending along said row.
6. A platter as claimed in Claim 5, wherein the elongate recess tapers outwards towards the upper surface.

25

7. A platter as claimed in Claim 5 or 6, wherein the lower surface is profiled such that a plurality of apertures in a column are together substantially surrounded by an elongate recess extending along said column.
- 5 8. A platter as claimed in Claim 7, wherein the elongate recess tapers outwards towards the lower surface.
9. A platter as claimed in any of Claims 1 to 8, further incorporating an indentation shaped to receive an item of cookware, the indentation being positioned to align the cookware with microwave radiation in the oven in use.
- 10 10. A platter as claimed in any of Claims 1 to 9, wherein the apertures are distributed over substantially the entire surface area of the platter.
- 15 11. A platter as claimed in any of Claims 1 to 10, made of a polymer material.
12. A platter as claimed in Claim 11, wherein the polymer material is a liquid crystal polymer resin reinforced with glass.
- 20 13. A platter as claimed in any of Claim 11, made of DuPont (RTM) Zenite (RTM) 7130.
14. A platter for use in a forced air / microwave combination oven, wherein the platter incorporates an indentation shaped to receive an item of cookware, the indentation being positioned to align the cookware with microwave radiation in the oven in use.

25



15. A platter for use in a forced air / microwave combination oven, the platter incorporating apertures distributed over substantially the entire surface area of the platter.
- 5 16. A platter for use in a forced air / microwave combination oven, the platter being made of a polymer material.
17. A platter as claimed in Claim 16, wherein the polymer material is a liquid crystal polymer resin reinforced with glass.
- 10 18. A platter as claimed in Claim 16, made of DuPont (RTM) Zenite (RTM) 7130.
19. A forced air / microwave combination oven having a platter as claimed in any preceding claim.
- 15 20. A method of cooking using a forced air / microwave combination oven having a platter as claimed in any of Claims 1 to 18.
21. A method of cooking as claimed in Claim 20 when dependent on Claims 9 or 14,
20 further comprising using an article of cookware shaped to correspond with the shape of the indentation, and locating said article of cookware in the indentation.
22. A platter for use in a forced air / microwave combination oven substantially as herein described with reference to and as illustrated in any combination of the
25 accompanying drawings.

23. A method of cooking using a forced air / microwave combination oven substantially as herein described with reference to and as illustrated in any combination of the accompanying drawings.

5

**ABSTRACT****IMPROVED PLATTER**

5

A platter for use in a forced air / microwave combination oven, the platter comprising an upper surface and a lower surface and incorporating a plurality of apertures passing through the thickness of the platter; wherein one or both of the surfaces of the platter incorporate a recess substantially surrounding at least one of the apertures. The invention also provides a
10 platter incorporating an indentation shaped to receive an item of cookware, the indentation being positioned to align the cookware with microwave radiation in the oven in use. Additionally, the invention provides a platter incorporating apertures distributed over substantially the entire surface area of the platter. Preferably the platter is made of a polymer material, particularly preferably a liquid crystal polymer resin such as DuPont (RTM)
15 Zenite (RTM) 7130. Also provided is a method of cooking using such a platter.

(Figure 2 to accompany abstract.)

1/5

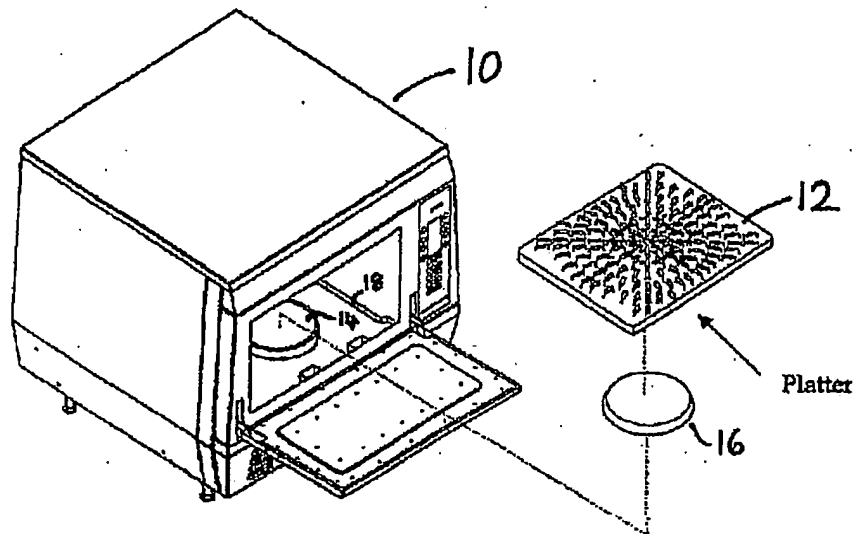


FIGURE 1

2/5

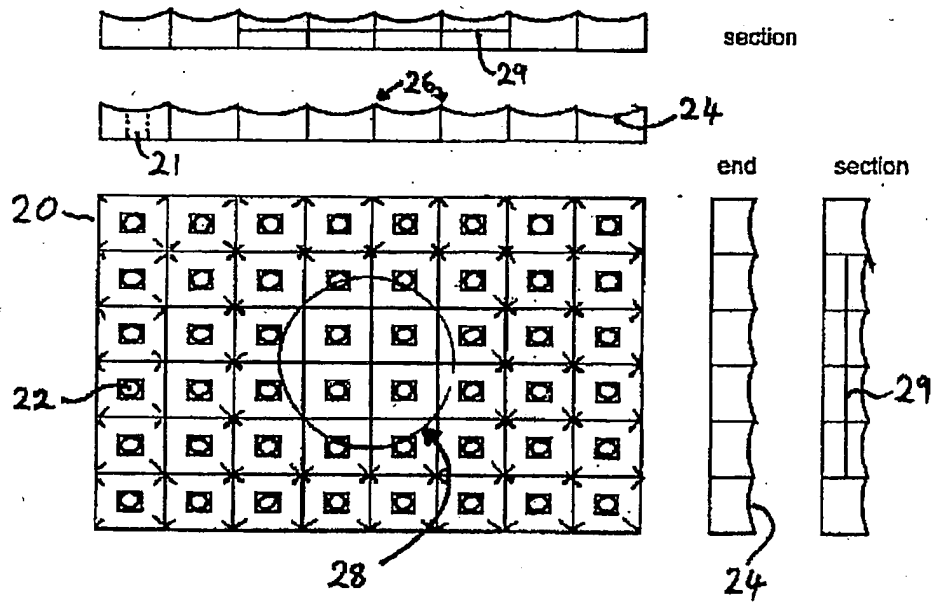


FIGURE 2

3/5

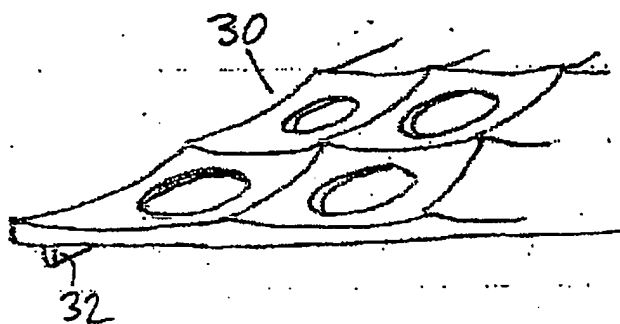


FIGURE 3

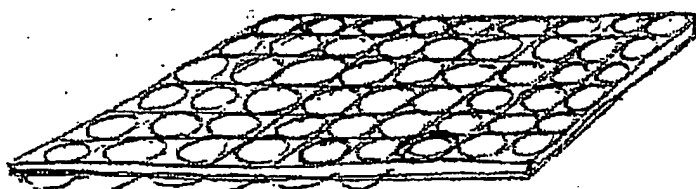


FIGURE 4

4/5

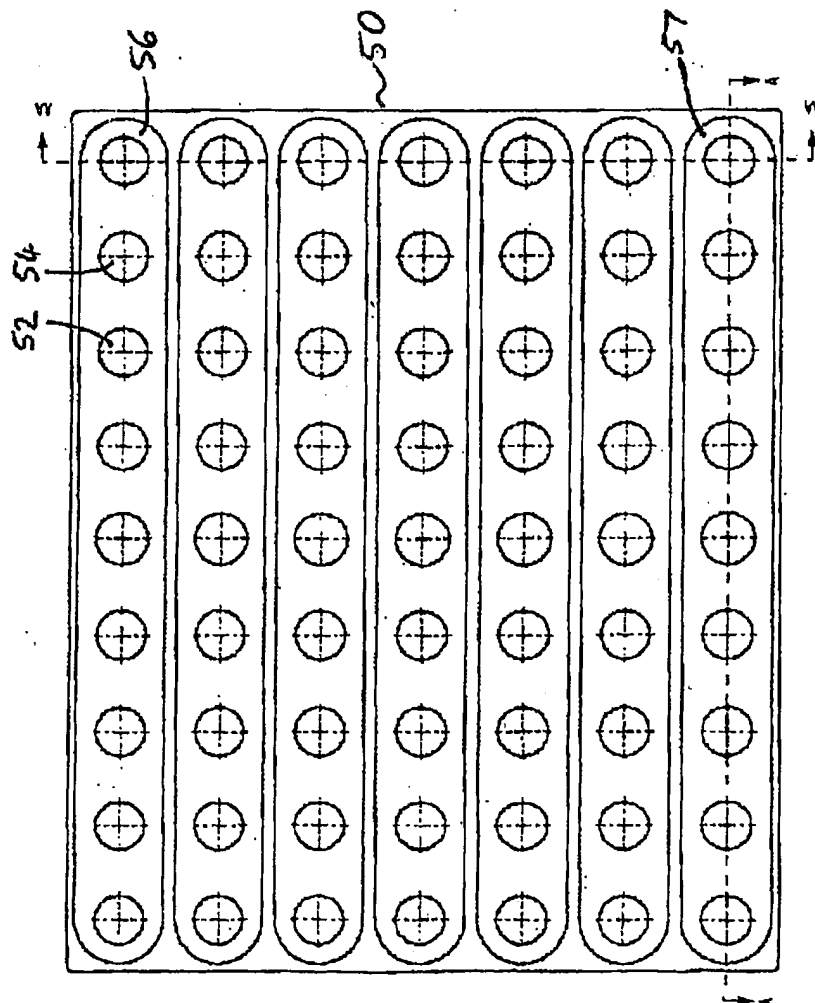
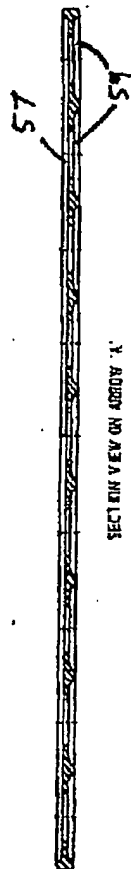
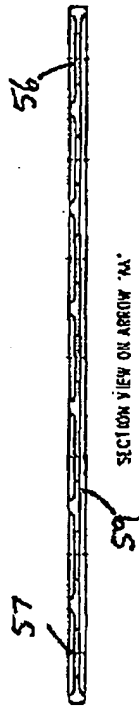


FIGURE 5

5/5

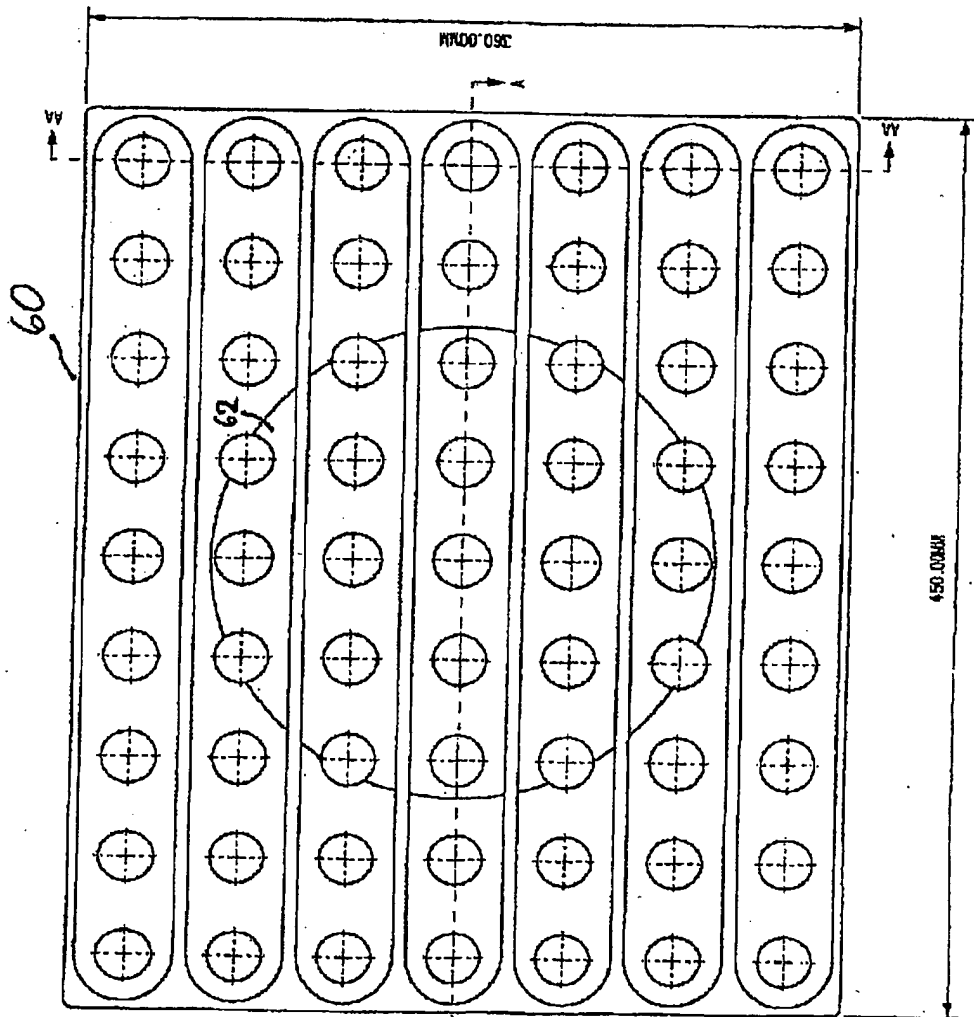
FIGURE 6



SECTION VIEW THROUGH 'AA'



SECTION VIEW THROUGH 'A'



PCT/GB2004/004113

